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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: Peter Ka-Fai Chow  
Serial No.: 09/816,706  
Filed: March 23, 2001  
Group Art Unit: 2665  
Before the Examiner: Daniel J. Ryman  
Title: MECHANISM TO STRIP LARQ HEADER AND  
REGENERATE FCS TO SUPPORT SLEEP MODE  
WAKE UP

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**APPEAL BRIEF**

Mail Stop Appeal Brief-Patents  
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P.O. Box 1450  
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I. **REAL PARTY IN INTEREST**

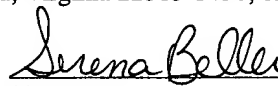
The real party in interest is Advanced Micro Devices, Inc., which is the assignee of the entire right, title and interest in the above-identified patent application.

**CERTIFICATION UNDER 37 C.F.R. § 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on June 17, 2004.

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Serena Beller  
(Printed name of person certifying)

## II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant, Appellant's legal representative or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## III. STATUS OF CLAIMS

Claims 1-12 are pending in the Application. Claims 1-12 stand rejected.

## IV. STATUS OF AMENDMENTS

The Appellant's response to the Office Action having a mailing date of January 15, 2004, has been considered, but the Examiner indicated that it did not place the application in condition for allowance because Appellant's arguments were deemed unpersuasive.

## V. SUMMARY OF INVENTION

Home networks are becoming more common and desirable for connecting computers within a home. Specification, page 1, lines 7-8. One type of home network is the home phone line network which uses telephone lines typically installed in residence homes for communication between computers in the home. Specification, page 1, lines 8-10. The Home Phone Line Networking Alliance (HPNA) has published a specification to standardize the behavior of home phone line networks. Specification, page 1, lines 10-11.

Such a network may allow multiple computers to communicate through telephone wires typically installed in residential homes. Specification, page 1, lines 14-15. The network may include a control chip which may include a Media Independent Interface (MII), a Media Access Control (MAC) and a Physical Layer

(PHY). Specification, page 1, lines 16-18. The chip may implement the HPNA specification version 2.0. Specification, page 1, line 18. The chip may receive a signal containing data packets through the telephone wires via a phone jack. Specification, page 1, lines 18-19. There may be an analog front end (AFE) which processes the signal between the chip and the telephone wires. Specification, page 1, line 19 – page 2, line 1. The chip may then process the packets received in the signal from the AFE and output a signal to the Host MAC or to an Ethernet controller. Specification, page 2, lines 1-2.

The Ethernet controller may be configured to power down, or "sleep", when not used. Specification, page 2, lines 3-4. A system administration on a remote site may "wake up" the Ethernet controller by sending a frame through the chip and to the Ethernet controller. Specification, page 2, lines 4-6. The frame has a particular bit pattern, the "wake pattern", at a set byte location in the frame. Specification, page 2, lines 6-7. To determine if it should wake, the Ethernet controller counts the bytes in the frame until it reaches the set byte location. Specification, page 2, lines 7-8. The Ethernet controller then attempts to match the bit pattern at the set byte location with the wake pattern. Specification, page 2, lines 8-9. If there is a match, then the Ethernet controller wakes and powers up. Specification, page 2, lines 9-10. Otherwise, the Ethernet controller continues to sleep. Specification, page 2, lines 10-11.

However, under HPNA 2.0, the frame may contain an additional 8-byte Limited Automatic Repeat Request (LARQ) in its header. Specification, page 2, lines 12-13. The LARQ conveys link layer priority information and provides a negative acknowledgment protocol to increase the speed of frame retransmission. Specification, page 2, lines 13-15. The Ethernet protocol used by the Ethernet controller does not recognize or expect the LARQ header. Specification, page 2, lines 15-16. When a HPNA frame with the LARQ header and the wake pattern is sent to

the Ethernet controller, the Ethernet controller counts the bytes to the set byte location and attempts to match the bit pattern with the wake pattern. Specification, page 2, lines 16-18. However, since the LARQ header has added 8 bytes to the frame, the location at which the Ethernet controller attempts to match the bit pattern is not where the wake pattern is actually located. Specification, page 2, lines 19-21. The Ethernet controller thus does not wake up. Specification, page 2, line 21.

Accordingly, there exists a need for a mechanism to strip the LARQ header to support remote wake up. Specification, page 3, lines 1-2.

The problems outlined above may at least in part be solved in some embodiments by a method for supporting sleep mode wake up in a home phone line network. Specification, page 3, lines 5-6. The method may include detecting a limited automatic repeat request (LARQ) header in a frame. Specification, page 3, lines 6-7. The method may further include stripping the LARQ header and a frame check sequence (FCS) in the frame. Specification, page 3, lines 7-8. The method may further include recalculating the FCS for the stripped frame. Specification, page 3, line 8. The method may further include adding the recalculated FCS to the stripped frame. Specification, page 3, lines 8-9. The method may further include stripping the LARQ header from a HPNA frame before it is sent to an Ethernet controller. Specification, page 3, lines 9-10. By stripping the LARQ header, the Ethernet controller will correctly find the set byte location for the wake pattern when it attempts to match the bit pattern with the wake pattern. Specification, page 3, lines 10-12. In this manner, sleep mode wake up is supported. Specification, page 3, line 12.

VI. ISSUES

A. Are claims 1, 3 and 5-8 properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hinchey et al. (U.S. Patent No. 5,999,541) (hereinafter "Hinchey") in view of Mallory (U.S. Patent No. 6,335,933)?

B. Is claim 2 properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory and in further view of Callon et al. (U.S. Patent No. 5,251,205) (hereinafter "Callon")?

C. Are claims 4 and 9-12 properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory and in further view of Gibson et al. (WO 96/13106) (hereinafter "Gibson")?

VII. GROUPING OF CLAIMS

Claims 1 and 3 form a first group.

Claims 2, 4, 5, 6, 7, 8, 9, 10, 11 and 12 should not be grouped together and should be considered separately.

The reasons for these groupings are set forth in Appellant's arguments in Section VIII.

VIII. ARGUMENT

A. Claims 1, 3 and 5-8 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory.

The Examiner has rejected claims 1, 3 and 5-8 under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory. Paper No. 7, page 7. Appellant respectfully traverses these rejections for at least the reasons stated below.

1. The Examiner has not presented any objective evidence for combining Hinchey and Mallory.

A *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. § 2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Hinchey with Mallory to detect a limited automatic repeat request (LARQ) header in a frame and to strip the LARQ header and a frame check sequence in the frame, as recited in claim 1 and similarly in claim 5, is "in order to convert an Ethernet frame into an LARQ Ethernet frame and vice-versa" Paper No. 7, page 7. This motivation is insufficient to support a *prima facie* case of obviousness as discussed below.

The Examiner's motivation appears to have been gleaned from the secondary reference (Mallory). In fact, the Examiner cites column 4, lines 16-38 and column 6, lines 9-20 of Mallory as support for his motivation. Paper No. 7, page 7. This is not evidence as to why one of ordinary skill in the art with the primary reference (Hinchey) in front of him would have been motivated to modify the primary reference (Hinchey) with the teachings of the secondary reference (Mallory). The Examiner's motivation is a motivation for the secondary reference (Mallory) to solve its problem. This is not a suggestion to combine the primary reference (Hinchey) with the secondary reference (Mallory). The Examiner must provide objective evidence as to

why one of ordinary skill in the art with the primary reference (Hinchey) in front of him, which teaches a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet (Abstract of Hinchey), would have been motivated to modify the primary reference (Hinchey) with the teachings of the secondary reference (Mallory), which teaches reducing data loss on a network with an unreliable physical layer by having the sending frame include a frame identifier selected from a set of reusable frame identifiers (Abstract of Mallory). *See In re Lee*, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000). Merely stating what the secondary reference teaches is not evidence for combining a primary reference (Hinchey) with the secondary reference (Mallory). *See Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining Hinchey, which teaches a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet, with Mallory, which teaches reducing data loss on a network with an unreliable physical layer by having the sending frame include a frame identifier selected from a set of reusable frame identifiers. *Id.* There is no suggestion in Hinchey of reducing data loss on a network with an unreliable physical layer. Neither is there any suggestion in Hinchey of reducing data loss on a network with an unreliable physical layer by having the sending frame include a frame identifier. Neither is there any suggestion in Hinchey of reducing data loss on a network with an unreliable physical

layer by having the sending frame include a frame identifier selected from a set of reusable frame identifiers. Since the Examiner has not submitted objective evidence for modifying Hinchey with Mallory, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8.

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Hinchey to detect a limited automatic repeat request (LARQ) header in a frame (Examiner admits that Hinchey does not teach this limitation). *Id.* There is no suggestion in Hinchey of detecting a LARQ header in a frame. Since the Examiner has not submitted objective evidence for modifying Hinchey to detect a limited automatic repeat request (LARQ) header in a frame, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Hinchey to strip the LARQ header and a frame check sequence (FCS) in the frame (Examiner admits that Hinchey does not teach stripping a LARQ header). *Id.* There is no suggestion in Hinchey of stripping a LARQ header. Since the Examiner has not submitted objective evidence for modifying Hinchey to strip a LARQ header in a frame, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. *Id.*

As a result of the foregoing, Appellant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. M.P.E.P. §2143.

2. By combining Hinchey with Mallory, the principle of operation of Hinchey would change.

If the proposed modification or combinations of the prior art would change the principle of the operation of the prior art invention being modified, the teachings of



the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). Further, if the proposed modification would render the prior art invention being modified unsatisfactorily for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). For the reasons discussed below, Appellant submits that by combining Hinchey with Mallory, the principle of operation in Hinchey would change and subsequently render the operation of Hinchey to perform its purpose unsatisfactorily.

Hinchey teaches a Token Ring network packet having a header and an information field that is prepared for transmission over an Ethernet network by the steps of removing the header information from the Token Ring packet, and associating a second header with the information field of the Token Ring packet, wherein the second header is compatible with the Ethernet network. Abstract. Hinchey further teaches that to prepare an IEEE 802.5 Token Ring network packet for transmission on an Ethernet network the Access Control ("AC") and Frame Control ("FC") fields are removed, the order of the destination address ("DA") field is reversed, the order of the source address ("SA") field is reversed, a Virtual Local Area Network ("VLAN") type field is added, a VLAN identification ("ID") field is added, and a length value field is added. Abstract. Hinchey further teaches that the information field from the Token Ring packet is retained. Abstract. Hinchey further teaches that if the newly formed tunneled packet would otherwise be smaller than the minimum size for an Ethernet packet the information field may be padded with null bits until the minimum size for an Ethernet packet is achieved. Abstract.

Mallory, on the other hand, teaches that there is a need in the art for a protocol and supporting methods and apparatus to reduce effective frame loss rates and delays to the level of standard Ethernet frame loss rates and delays. Column 2, lines 52-55. Mallory further teaches sending frames that include frame identifiers that can be used

for a limited automatic repeat request. Abstract. Mallory further teaches that upon receipt of a frame, the receiver determines, from the frame identifier, if frames prior to the received frame were lost in transit. Abstract.

By combining Hinchey with Mallory, Hinchey would no longer be able to make a Token Ring frame appear to be an Ethernet frame as described above. Instead, the Token Ring frame may not be modified in order to preserve the frame identifier, as taught in Mallory, in order to be used for a limited automatic repeat request so as to possibly prevent packets from being lost over unreliable channels. Thus, by combining Hinchey with Mallory, the principle of operation in Hinchey would change, subsequently rendering the operation of Hinchey to perform its purpose unsatisfactorily. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 1, 3 and 5-8. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959); *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

3. Hinchey and Mallory, taken singly or in combination, do not teach or suggest the following claim limitations.

Appellant respectfully asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "a first logic block for detecting a LARQ header in a frame; a second logic block for stripping the LARQ header and a FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame" as recited in claim 5. The Examiner has not cited any passage in either Hinchey or Mallory that teaches logic blocks in a home phone line controller that performs the above-recited steps. The Examiner is reminded that the Examiner bears the initial burden and must submit objective evidence and not rely on his own subjective opinion in support of a *prima facie* case of obviousness *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). Since the Examiner has not provided any evidence that any of the references, either

alone or in combination, teach the above-cited claim limitation, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 5. M.P.E.P. §2143.

Appellant further asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 6. The Examiner asserts that Hinchey in view of Mallory implicitly teach the above-cited claim limitation. Paper No. 7, page 8. Appellant respectfully traverses the assertion that Hinchey in view of Mallory implicitly teach the above-cited claim limitation. There is no suggestion in either Hinchey or Mallory of having a logic block for detecting a LARQ header in a frame. Neither is there any suggestion in either Hinchey or Mallory of asserting a signal to a logic block that indicates that the LARQ header is enabled. The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory teach asserting a signal to a logic block that indicates that the LARQ header is enabled and must be stripped from the frame, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support his inherency argument with objective evidence meeting the above requirements. However, the Examiner has not supported his assertion that Hinchey in view of Mallory teach asserting a signal to a logic block that indicates that the LARQ header is enabled. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 6. M.P.E.P. §2143.

Appellant further asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "wherein the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that

the LARQ header is to be stripped from the frame" as recited in claim 7. The Examiner asserts that Hinchey in view of Mallory implicitly teach the above-cited claim limitation. Paper No. 7, page 8. Appellant respectfully traverses the assertion that Hinchey in view of Mallory implicitly teach the above-cited claim limitation. There is no suggestion in either Hinchey or Mallory of having a first logic block asserting a signal to a second logic block that indicates that the FCS is to be stripped from the frame. Neither is there any suggestion in either Hinchey or Mallory of having a first logic block asserting a signal to a second logic block that indicates that the LARQ header is to be stripped from the frame. The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory teach the above-cited claim limitation, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support his inherency argument with objective evidence meeting the above requirements. However, the Examiner has not supported his assertion that Hinchey in view of Mallory teach the above-cited claim limitation. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 7. M.P.E.P. §2143.

Appellant further asserts that Hinchey and Mallory, taken singly or in combination, do not teach or suggest "wherein an asserted fourth signal to the third logic block enables the recalculation of the FCS" as recited in claim 8. The Examiner asserts that Hinchey in view of Mallory implicitly teach the above-cited claim limitation. Paper No. 7, page 8. Appellant respectfully traverses the assertion that Hinchey in view of Mallory implicitly teach the above-cited claim limitation. There is no suggestion in either Hinchey or Mallory of asserting a signal to a logic block that enables the recalculation of the FCS. The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory teach asserting a

signal to a logic block that enables the recalculation of the FCS, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support his inherency argument with objective evidence meeting the above requirements. However, the Examiner has not supported his assertion that Hinchey in view of Mallory teach asserting a signal to a logic block that enables the recalculation of the FCS. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 8. M.P.E.P. §2143.

As a result of the foregoing, Appellant respectfully asserts that there are numerous claim limitations not taught or suggested in the cited prior art, and thus the Examiner has not presented a *prima facie* case of obviousness for rejecting the above-cited claims as being unpatentable over Hinchey in view of Mallory. M.P.E.P. §2143.

B. Claim 2 is not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory and in further view of Callon.

The Examiner has rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory and in further view of Callon. Paper No. 7, page 8. Appellant respectfully traverses this rejection for at least the reasons stated below.

1. The Examiner has not presented any objective evidence for combining Hinchey, Mallory and Callon.

As stated above, a *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to

make the claimed inventions. M.P.E.P. § 2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Hinchey with Mallory and Callon for placing information in the LARQ header in a frame status frame which will follow the stripped frame, as recited in claim 2, is "in order to ensure that the length of the stripped frame is within the transmission size of the stripped frame's network without losing the information contained in the stripped portion of the frame." Paper No. 7, page 9. This motivation is insufficient to support a *prima facie* case of obviousness as discussed below.

The Examiner has not presented any objective evidence to support his motivation but instead relies upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). There is no suggestion in either Hinchey or Mallory of ensuring that the length of the stripped frame is within the transmission size of the stripped frame's network without losing the information contained in the stripped portion of the frame. Instead, the Examiner's motivation appears to have been gleaned from Appellant's disclosure (see page 6, lines 5-7 of the Specification). Any judgment of obviousness must not include knowledge gleaned only from Appellant's disclosure. *In re McLaughlin*, 170 U.S.P.Q.2d 209, 212 (C.C.P.A. 1979). Hence, this is not evidence as to why one of ordinary skill in the art with the primary reference (Hinchey) in front of him would be motivated to modify the primary reference (Hinchey) with the teachings of the secondary references (Mallory and Callon). Consequently, the

Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claim 2. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining Hinchey, which teaches a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet, with Mallory, which teaches reducing data loss on a network with an unreliable physical layer by having the sending frame include a frame identifier selected from a set of reusable frame identifiers, as well as with Callon, which teaches a method for connecting a network so that TCP/IP and OSI 8473 packets may be routed in the same domain (Abstract of Callon). *Id.* There is no suggestion in Hinchey of connecting a network so that TCP/IP and OSI 8473 packets may be routed in the same domain. Since the Examiner has not submitted objective evidence for modifying Hinchey with Mallory and Callon, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 2. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Hinchey to place information in the LARQ header in a frame status frame which will follow the stripped fame (Examiner admits that Hinchey does not teach this limitation). *Id.* There is no suggestion in Hinchey of placing information a LARQ header in a frame status frame. Neither is there any suggestion in Hinchey of placing information a LARQ header in a frame status frame which will follow the stripped frame. Since the Examiner has not submitted objective evidence for modifying Hinchey to place information in the LARQ header in a frame status frame which will follow the stripped fame, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 2. *Id.*

As a result of the foregoing, Appellant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 2. M.P.E.P. §2143.

2. The Examiner has not presented a reasonable expectation of success when combining Hinchey with Callon.

The Examiner must present a reasonable expectation of success in combining Hinchey with Callon in order to establish a *prima facie* case of obviousness. M.P.E.P. §2143.02. As stated above, Hinchey teaches a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet. Further, as stated above, Callon teaches a method for connecting a network so that TCP/IP and OSI 8473 packets may be routed in the same domain. The Examiner has not presented any evidence that there would be a reasonable expectation of success in combining a reference (Hinchey), which teaches, a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet, with a reference (Callon), which teaches connecting a network so that TCP/IP and OSI 8473 packets may be routed in the same domain. Consequently, the Examiner has not provided a *prima facie* case of obviousness for rejecting claim 2. M.P.E.P. §2143.02.

3. Hinchey, Mallory and Callon, taken singly or in combination, do not teach or suggest the following claim limitations.

Appellant respectfully asserts that Hinchey, Mallory and Callon, taken singly or in combination, do not teach or suggest "placing information in the LARQ header in a frame status frame which will follow the stripped frame" as recited in claim 2. The Examiner cites column 4, lines 5-34 of Hinchey for teaching placing stripped



information within a designated portion of the frame and cites column 48, lines 30-43 of Callon for teaching a packet transmission system supporting multiple protocols where the packets are fragmented if the maximum transmission unit of a link is smaller than the packet. Paper No. 7, page 9. Appellant respectfully traverses that the combination of these references teaches the above-cited limitation.

Hinchey instead teaches what fields are removed from a Token ring frame and what fields are reversed and what fields are added so that the Token ring frame "appears" as if it is an Ethernet frame. Hinchey does not take information from one frame and place it in another frame.

Callon instead teaches that packets are fragmented if a packet is larger than the Maximum Transmission Unit ("MTU") of a link. Callon is stating a simple fact that if a data packet is larger than is allowed by the MTU of the link, then the data packet is partitioned into two or more packets so that the data packet is not larger than the MTU of the link. Callon further teaches that for the IP protocol, the partitioning of a data packet if it is larger than the MUT of the link is referred to as "fragmentation." Callon further teaches that for the 8473 protocol, the partitioning of a data packet if it is larger than the MUT of the link is referred to as "segmentation." Appellant is not claiming either of these protocols.

Neither of these references teach or suggest, alone or in combination, adding the information in a LARQ header into a frame status frame following the frame stripped of the LARQ header. Therefore, the Examiner has not presented a *prima facie* case of obviousness, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- D. Claims 4 and 9-12 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory and in further view of Gibson.

The Examiner has rejected claims 4 and 9-12 under 35 U.S.C. §103(a) as being unpatentable over Hinchey in view of Mallory and in further view of Gibson. Paper No. 7, page 9. Appellant respectfully traverses these rejections for at least the reasons stated below.

1. The Examiner has not presented any objective evidence for combining Hinchey with Mallory and Gibson.

As stated above, a *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. § 2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Hinchey with Mallory and Gibson to determine if a bit pattern at a set byte location in the stripped frame matches a wake pattern, as recited in claim 4, is "to save energy." Paper No. 7, page 9. The Examiner's motivation for modifying Hinchey with Mallory and Gibson to have a system that includes an Ethernet controller in a sleep mode, as recited in claim 9, is to "conserve power." Paper No. 7, page 10. These motivations are insufficient to support a *prima facie* case of obviousness as discussed below.

The Examiner's motivations appear to have been gleaned from the secondary reference (Gibson). In fact, the Examiner cites page 6, lines 15-22; page 7, lines 14-19 and page 9, line 21 – page 12, line 10 of Gibson as support for his motivations. Paper No. 7, pages 9-10. This is not evidence as to why one of ordinary skill in the art with the primary reference (Hinchey) in front of him would have been motivated to modify the primary reference (Hinchey) with the teachings of the secondary reference (Gibson). The Examiner's motivation is a motivation for the secondary reference (Gibson) to solve its problem. This is not a suggestion to combine the primary reference (Hinchey) with the secondary references (Mallory and Gibson). The Examiner must provide objective evidence as to why one of ordinary skill in the art with the primary reference (Hinchey) in front of him, which teaches a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet, would have been motivated to modify the primary reference (Hinchey) with the teachings of the secondary reference (Mallory), which teaches reducing data loss on a network with an unreliable physical layer by having the sending frame include a frame identifier selected from a set of reusable frame identifiers, along with the teachings of the other secondary reference (Gibson), which teaches solving problems of remotely waking up a device in a low power mode connected to a node of a network (Page 3, lines 4-8 of Gibson). See *In re Lee*, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000). Merely stating what the secondary reference teaches is not evidence for combining a primary reference (Hinchey) with the secondary references (Mallory and Gibson). See *Id.* Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 4 and 9-12. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of combining Hinchey, which teaches a token ring network packet having a header and an information field that is transmitted over an Ethernet network by removing the header information from the Token Ring packet and associating a second header with the information field of the Token Ring packet, with Gibson, which teaches solving problems of remotely waking up a device in a low power mode connected to a node of a network. *Id.* There is no suggestion in Hinchey of remotely waking up a device. Neither is there any suggestion in Hinchey of remotely waking up a device in a low power mode connected to a node of a network. Since the Examiner has not submitted objective evidence for modifying Hinchey with Gibson, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4 and 9-12. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Hinchey to determine if a bit pattern at a set byte location in the stripped frame matches a wake pattern (Examiner admits that Hinchey does not teach this limitation). *Id.* There is no suggestion in Hinchey of determining if a bit pattern at a set byte location matches a wake pattern. Neither is there any suggestion in Hinchey of determining if a bit pattern at a set byte location in a stripped frame matches a wake pattern. Since the Examiner has not submitted objective evidence for modifying Hinchey to determine if a bit pattern at a set byte location in the stripped frame matches a wake pattern, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4 and 9-12. *Id.*

Further, the Examiner must submit objective evidence and not rely on his own subjective opinion in support of modifying Hinchey to have a system that includes an Ethernet controller in a sleep mode (Examiner admits that Hinchey does not teach this limitation). *Id.* There is no suggestion in Hinchey of having a system that includes an Ethernet controller in a sleep mode. Since the Examiner has not submitted

objective evidence for modifying Hinchey to have a system that includes an Ethernet controller in a sleep mode, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4 and 9-12. *Id.*

As a result of the foregoing, Appellant respectfully asserts that the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4 and 9-12. M.P.E.P. §2143.

2. Hinchey, Mallory and Gibson, taken singly or in combination, do not teach or suggest the following claim limitations.

Appellant respectfully asserts that Hinchey, Mallory and Gibson, taken singly or in combination, do not teach or suggest "determining if a bit pattern at a set byte location in the stripped frame matches a wake pattern" as recited in claim 4. The Examiner states that Hinchey in view of Mallory does not teach the above-cited claim limitation. Paper No. 7, page 9. The Examiner cites page 6, lines 15-22; page 7, lines 14-19 and page 9, line 21 – page 12, line 10 of Gibson as teaching the above-cited claim limitation. Paper No. 7, page 9. Appellant respectfully traverses and asserts that Gibson instead teaches a wake-up data sequence in a frame. There is no determination step taught in Gibson. That is, there is no determination as to whether a bit pattern at a particular location matches a wake pattern. Neither is there a determination as to whether a bit pattern at a particular location in a stripped frame matches a wake pattern. Therefore, the Examiner has not presented a *prima facie* case of obviousness, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellant further asserts that Hinchey, Mallory and Gibson, taken singly or in combination, do not teach or suggest "a home phone line network controller, wherein the home phone line network controller comprises: a first logic block for detecting a LARQ header in a frame; a second logic block for stripping the LARQ header and a

FCS in the frame; and a third logic block for recalculating the FCS for the stripped frame and for adding the recalculated FCS to the stripped frame" as recited in claim 9. The Examiner has not cited any passage in either Hinchey, Mallory or Gibson that teaches logic blocks in a home phone line controller that performs the above-recited steps. The Examiner is reminded that the Examiner bears the initial burden and must submit objective evidence and not rely on his own subjective opinion in support of a *prima facie* case of obviousness *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992). Since the Examiner has not provided any evidence that any of the references, either alone or in combination, teach the above-cited claim limitation, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 9. M.P.E.P. §2143.

Appellant further asserts that Hinchey, Mallory and Gibson, taken singly or in combination, do not teach or suggest "wherein an asserted first signal to the first logic block indicates that the LARQ header is enabled and must be stripped from the frame" as recited in claim 10. The Examiner asserts that Hinchey in view of Mallory and Gibson implicitly teach the above-cited claim limitation. Paper No. 7, page 10. Appellant respectfully traverses the assertion that Hinchey in view of Mallory and Gibson implicitly teach the above-cited claim limitation. There is no suggestion in either Hinchey, Mallory or Gibson of having a logic block for detecting a LARQ header in a frame. Neither is there any suggestion in either Hinchey, Mallory or Gibson of asserting a signal to a logic block that indicates that the LARQ header is enabled. The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory and in further view of Gibson teach asserting a signal to a logic block that indicates that the LARQ header is enabled and must be stripped from the frame, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the

Examiner must support his inherency argument with objective evidence meeting the above requirements. However, the Examiner has not supported his assertion that Hinchey in view of Mallory and in further view of Gibson teach asserting a signal to a logic block that indicates that the LARQ header is enabled. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 10. M.P.E.P. §2143.

Appellant further asserts that Hinchey, Mallory and Gibson, taken singly or in combination, do not teach or suggest "wherein the first logic block asserts a second signal and a third signal to the second logic block, wherein the second signal indicates that the FCS is to be stripped from the frame, wherein the third signal indicates that the LARQ header is to be stripped from the frame" as recited in claim 11. The Examiner asserts that Hinchey in view of Mallory and in further view of Gibson implicitly teach the above-cited claim limitation. Paper No. 7, page 11. Appellant respectfully traverses the assertion that Hinchey in view of Mallory and in further view of Gibson implicitly teach the above-cited claim limitation. There is no suggestion in either Hinchey, Mallory or Gibson of having a first logic block asserting a signal to a second logic block that indicates that the FCS is to be stripped from the frame. Neither is there any suggestion in either Hinchey, Mallory or Gibson of having a first logic block asserting a signal to a second logic block that indicates that the LARQ header is to be stripped from the frame. The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory and in further view of Gibson teach the above-cited claim limitation, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support his inherency argument with objective evidence meeting the above requirements. However, the Examiner has not supported his assertion that Hinchey in view of Mallory and in further view of

Gibson teach the above-cited claim limitation. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 11. M.P.E.P. §2143.

Appellant further asserts that Hinchey, Mallory and Gibson, taken singly or in combination, do not teach or suggest "wherein an asserted fourth signal to the third logic block enables the recalculation of the FCS" as recited in claim 12. The Examiner asserts that Hinchey in view of Mallory and in further view of Gibson implicitly teach the above-cited claim limitation. Paper No. 7, page 11. Appellant respectfully traverses the assertion that Hinchey in view of Mallory and in further view of Gibson implicitly teach the above-cited claim limitation. There is no suggestion in either Hinchey, Mallory or Gibson of asserting a signal to a logic block that enables the recalculation of the FCS. The Examiner must provide extrinsic evidence that must make clear that Hinchey in view of Mallory and in further view of Gibson teach asserting a signal to a logic block that enables the recalculation of the FCS, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support his inherency argument with objective evidence meeting the above requirements. However, the Examiner has not supported his assertion that Hinchey in view of Mallory and in further view of Gibson teach asserting a signal to a logic block that enables the recalculation of the FCS. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claim 12. M.P.E.P. §2143.

As a result of the foregoing, Appellant respectfully asserts that there are numerous claim limitations not taught or suggested in the cited prior art, and thus the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4 and 9-12 as being unpatentable over Hinchey in view of Mallory and in further view of Gibson. M.P.E.P. §2143.



IX. CONCLUSION

For the reasons noted above, the rejections of claims 1-12 are in error. Appellant respectfully requests reversal of the rejections and allowance of claims 1-12.

Respectfully submitted,

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**APPENDIX**

1        1.        A method for supporting sleep mode wake up in a home phone line network,  
2        comprising the steps of:

3                (a)        detecting a limited automatic repeat request (LARQ) header in a  
4        frame;

5                (b)        stripping the LARQ header and a frame check sequence (FCS) in the  
6        frame;

7                (c)        recalculating the FCS for the stripped frame; and

8                (d)        adding the recalculated FCS to the stripped frame.

1        2.        The method of claim 1, wherein the stripping step (b) further comprises:

2                (b1)        placing information in the LARQ header in a frame status frame which  
3        will follow the stripped frame.

1        3.        The method of claim 1, further comprising:

2                (e)        sending the stripped frame with the recalculated FCS to an Ethernet  
3        controller.

1        4.        The method of claim 3, further comprising:

2                (f)        determining if a bit pattern at a set byte location in the stripped frame  
3        matches a wake pattern.

1        5.        A home phone line controller, comprising:

2                a first logic block for detecting a LARQ header in a frame;

3                a second logic block for stripping the LARQ header and a FCS in the frame;

4        and

5                a third logic block for recalculating the FCS for the stripped frame and for  
6        adding the recalculated FCS to the stripped frame.

1       6.     The controller of claim 5, wherein an asserted first signal to the first logic  
2     block indicates that the LARQ header is enabled and must be stripped from the frame.

1       7.     The controller of claim 5, wherein the first logic block asserts a second signal  
2     and a third signal to the second logic block, wherein the second signal indicates that  
3     the FCS is to be stripped from the frame, wherein the third signal indicates that the  
4     LARQ header is to be stripped from the frame.

1       8.     The controller of claim 5, wherein an asserted fourth signal to the third logic  
2     block enables the recalculation of the FCS.

1       9.     A system, comprising:  
2             an Ethernet controller in a sleep mode; and  
3             a home phone line network controller, wherein the home phone line network  
4     controller comprises:  
5             a first logic block for detecting a LARQ header in a frame,  
6             a second logic block for stripping the LARQ header and a FCS in the  
7     frame,  
8             and  
9             a third logic block for recalculating the FCS for the stripped frame and  
10     for adding the recalculated FCS to the stripped frame.

1       10.    The system of claim 9, wherein an asserted first signal to the first logic block  
2     indicates that the LARQ header is enabled and must be stripped from the frame.

1       11.    The system of claim 9, wherein the first logic block asserts a second signal  
2     and a third signal to the second logic block, wherein the second signal indicates that  
3     the FCS is to be stripped from the frame, wherein the third signal indicates that the  
4     LARQ header is to be stripped from the frame.

- 1 12. The system of claim 9, wherein an asserted fourth signal to the third logic  
2 block enables the recalculation of the FCS.

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